

ABSTRACT OF THE DISCLOSURE

This invention identifies tumor senescence genes induced by treatment with cytotoxic agents. The invention provides reagents and methods for identifying compounds that induce expression of these cellular genes and produce cellular senescence, particularly senescence in tumor cells. The invention also provides reagents that are recombinant mammalian cells containing recombinant expression constructs that express a reporter gene under the transcriptional control of a promoter for a gene the expression of which is modulated in senescent cells, and methods for using such cells to identify compounds that modulate expression of these cellular genes.